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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,293	12/18/2001	Masanori Ayabe	350292001100	1682

25227 7590 08/20/2003

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EXAMINER

HAAS, WENDY C

ART UNIT	PAPER NUMBER
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1661

DATE MAILED: 08/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,293

Applicant(s)

AYABE ET AL.

Examiner

Wendy C Haas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayabe et al. Ayabe et al. teach a method of culturing *Allium sativum* plants from a stem disc explant that forms a dome-shaped tissue in the absence of plant hormones. Ayabe et al. further teach that this method can be used to create virus-free plants. Finally, Ayabe et al. teach that the basal part of the foliage leaf also appeared to be an excellent explant for producing *in vitro* shoots in a preliminary experiment.

Ayabe et al. do not teach culture of a foliage leaf base to form a "domy tissue".

Ayabe et al. note that *in vitro* shoots progressively developed from the stem disc explant, beginning as "domy tissue" at one week of culture and progressing without interference to *in vitro* shoots at three weeks of culture. Ayabe et al. also note that electron microscopy revealed that "development of the *in vitro* shoots was restricted to regions surrounded by the basements of foliage leaves."

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A person of ordinary skill in the art would be motivated to use Ayabe et al.'s method of stem-disc culture with a basal leaf explant because Ayabe et al. noted the leaf base is an effective explant and garlic bulbs contain more basal leaf material so more plants could thus be produced. Ayabe et al. note that one major advantage to the method is its applicability to large scale cultivation.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Number 06197650 A in view of Ayabe et al.

The Japanese Patent teaches a method of culturing *Allium sativum* plants from a leaf base explant in a hormone-free medium.

The teachings of Ayabe et al. are set forth above.

The Japanese Patent abstract does not teach culture of a foliage leaf base to form a "domy tissue", a specific thickness of explant in millimeters, or generation of virus-free plants.

A person of ordinary skill in the art would be motivated to use the method of Japanese Patent Number 06197650 A to culture virus-free plants from callus (domy tissue) because Ayabe et al. noted the leaf base is an effective explant and that tissue culture is an excellent method for virus eradication in garlic.

Conclusion

No claims are allowed.

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Future Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wendy C. Haas whose telephone number is (703) 308-8898. The Examiner is normally available Monday through Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Bruce Campell, can be reached on (703) 308-4205. The fax number for the group is (703) 872-9306 for regular communications and (703) 872-9307 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Matrix Customer Service Center whose telephone number is (703) 872-9305

W. C. Haas



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